L Number	Hits	Search Text	DB	Time stamp
2	17443	(bioinert or biocompatible) and (blade	USPAT;	2003/07/10
		scalpel drill bit knife cutter saw needle dissector pin screw tool instrument)	US-PGPUB	10:11
3	2938	((bioinert or biocompatible) and (blade	USPAT;	2003/07/10
		scalpel drill bit knife cutter saw needle	US-PGPUB	10:01
		dissector pin screw tool instrument)) and (bioinert or biocompatible) same (blade		
		scalpel drill bit knife cutter saw needle		
	1155	<pre>dissector pin screw tool instrument) (((bioinert or biocompatible) and (blade</pre>	USPAT;	2003/07/10
4	1155	scalpel drill bit knife cutter saw needle	US-PGPUB	10:03
		dissector pin screw tool instrument)) and		
		(bioinert or biocompatible) same (blade scalpel drill bit knife cutter saw needle		
		dissector pin screw tool instrument)) and		
		(bioinert or biocompatible) with (blade		
		scalpel drill bit knife cutter saw needle dissector pin screw tool instrument)		
7	28481	(technical near ceramic) or (ceramic same	USPAT;	2003/07/10
		((aluminum adj oxide) or (zirconium near	US-PGPUB;	10:28
İ		oxide) or (silicon near nitride))) or (ceramic near (ytzp or ztpa))	EPO; JPO; DERWENT;	
			IBM_TDB	
9	2637	(blade or scalpel or drill or bit or knife or cutter or saw or needle or	USPAT; US-PGPUB;	2003/07/10
		dissector or pin or screw or tool or	EPO; JPO;	10.33
		instrument or scissors or saw or drill or	DERWENT;	
		bit or bushing or templet) same ((technical near ceramic) or (ceramic	IBM_TDB	
		same ((aluminum adj oxide) or (zirconium		
		near oxide) or (silicon near nitride)))		
11	2206	or (ceramic near (ytzp or ztpa))) (blade or scalpel or drill or bit or	USPAT;	2003/07/10
11	2200	knife or cutter or saw or needle or	US-PGPUB;	10:40
		dissector or pin or screw or tool or instrument or scissors or saw or drill or	EPO; JPO; DERWENT;	
		bit or bushing or templet) same	IBM TDB	
		((technical near ceramic) or (ceramic	_	
		with ((aluminum adj oxide) or (zirconium near oxide) or (silicon near nitride)))		
		or (ceramic near (ytzp or ztpa)))		
12	1229	(blade or scalpel or drill or bit or	USPAT;	2003/07/10
		knife or cutter or saw or needle or dissector or pin or screw or tool or	US-PGPUB; EPO; JPO;	10:45
		instrument or scissors or saw or drill or	DERWENT;	
		bit or bushing or templet) with ((technical near ceramic) or (ceramic	IBM_TDB	
		with ((aluminum adj oxide) or (zirconium		
		near oxide) or (silicon near nitride)))		
13	1213	or (ceramic near (ytzp or ztpa))) (blade or scalpel or drill or bit or	USPAT;	2003/07/10
		knife or cutter or saw or needle or	US-PGPUB;	10:48
		dissector or pin or screw or tool or instrument or scissors or saw or drill or	EPO; JPO; DERWENT;	
		bit or bushing or templet) with	IBM TDB	
		((technical near ceramic) or (ceramic	_	
		with ((aluminum adj oxide) or (zirconium adj oxide) or (silicon adj nitride))) or		
		(ceramic near (ytzp or ztpa)))		
14	9	,	USPAT; US-PGPUB;	2003/07/10
		knife or cutter or saw or needle or dissector or pin or screw or tool or	EPO; JPO;	11.02
		instrument or scissors or saw or drill or	DERWENT;	
15	31	bit) with (technical near ceramic)   (blade or scalpel or drill or bit or	IBM_TDB USPAT;	2003/07/10
13	31	knife or cutter or saw or needle or	US-PGPUB;	10:54
		dissector or pin or screw or tool or	EPO; JPO;	
		instrument or scissors or saw or drill or bit) same (technical near ceramic)	DERWENT; IBM TDB	
L <b></b>	l	1 220, Damo (DOSIMITORI MORI OCTAMITO)		L

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16 22 ((blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (technical near ceramic) ) not ((blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) with (technical near ceramic) )  17 1207 (blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  18 970 (blade or scalpel or drill or bit or knife or cutter or saw or needle or USPAT; knife or cutter or saw or needle or USPAT; knife or cutter or saw or needle or USPAT;	2003/07/10 10:55 2003/07/10 11:04
instrument or scissors or saw or drill or bit) same (technical near ceramic) ) not ((blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) with (technical near ceramic) ) (blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  18 970 (blade or scalpel or drill or bit or USPAT;	11:04
bit) same (technical near ceramic) ) not ((blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) with (technical near ceramic) )  1207 (blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  18 970 (blade or scalpel or drill or bit or USPAT;	11:04
((blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) with (technical near ceramic))  (blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  (blade or scalpel or drill or bit or USPAT;	11:04
knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) with (technical near ceramic)) (blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adj oxide))  18  970 (blade or scalpel or drill or bit or USPAT; USPAT; USPAT; USPAT;	11:04
dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) with (technical near ceramic) )  1207 (blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  18 970 (blade or scalpel or drill or bit or USPAT;	11:04
instrument or scissors or saw or drill or bit) with (technical near ceramic) )  (blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  970 (blade or scalpel or drill or bit or USPAT;	11:04
bit) with (technical near ceramic) ) (blade or scalpel or drill or bit or knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  18 970 (blade or scalpel or drill or bit or USPAT;	11:04
17	11:04
knife or cutter or saw or needle or dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  18  970 (blade or scalpel or drill or bit or USPAT;	11:04
dissector or pin or screw or tool or instrument or scissors or saw or drill or bit) same (ceramic same (aluminum adjoxide))  18  970 (blade or scalpel or drill or bit or USPAT;	
instrument or scissors or saw or drill or berwent; bit) same (ceramic same (aluminum adj oxide))  18 970 (blade or scalpel or drill or bit or USPAT;	2003/07/10
bit) same (ceramic same (aluminum adj oxide))  18 970 (blade or scalpel or drill or bit or USPAT;	2003/07/10
oxide)) 18 970 (blade or scalpel or drill or bit or USPAT;	2003/07/10
970 (blade or scalpel or drill or bit or USPAT;	2003/07/10
	2003/07/10
	11:06
dissector or pin or screw or tool or EPO; JPO;	
instrument or scissors or saw or drill or DERWENT; bit) same (ceramic with (aluminum adj IBM TDB	
oxide)) 19 380 (blade or scalpel or drill or bit or USPAT;	2003/07/10
knife or cutter or saw or needle or US-PGPUB;	11:35
dissector or tool or instrument or EPO; JPO;	11.33
scissors or drill or bit) with (ceramic DERWENT;	
with (aluminum adj oxide))  IBM TDB	
20 119 (blade or scalpel or drill or bit or USPAT;	2003/07/10
knife or cutter or saw or needle or US-PGPUB;	11:38
dissector or tool or instrument or EPO; JPO;	11.30
scissors or drill or bit) with (ceramic DERWENT;	
with (zirconium adj oxide)) IBM TDB	
21 627 (blade or scalpel or drill or bit or USPAT;	2003/07/10
knife or cutter or saw or needle or US-PGPUB;	11:42
dissector or tool or instrument or EPO; JPO;	
scissors or drill or bit) with (ceramic   DERWENT;	
with (silicon adj nitride)) IBM TDB	
0 (blade or scalpel or drill or bit or USPAT;	2003/07/10
knife or cutter or saw or needle or US-PGPUB;	11:43
dissector or tool or instrument or EPO; JPO;	
scissors or drill or bit) with (ceramic   DERWENT;	
near (ytzp or ztpa))   IBM_TDB	
9 (blade or scalpel or drill or bit or USPAT;	2003/07/10
knife or cutter or saw or needle or US-PGPUB;	11:43
dissector or tool or instrument or EPO; JPO;	
scissors or drill or bit) and (ceramic   DERWENT;	
with(ytzp or ztpa)) IBM_TDB	0000/07/10
9 (blade or scalpel or drill or bit or USPAT;	2003/07/10
knife or cutter or saw or needle or US-PGPUB;	11:47
dissector or tool or instrument or EPO; JPO;	
scissors or drill or bit) and (ceramic DERWENT; with (ytzp or ztpa))	
with (ytzp or ztpa))  18 (blade or scalpel or drill or bit or USPAT;	2003/07/10
knife or cutter or saw or needle or US-PGPUB;	12:15
dissector or tool or instrument or EPO; JPO;	12.13
scissors or drill or bit) and (ytzp or DERWENT;	
ztpa)	
26 0 ("(ytzp or ztpa) adj3 (comprises or USPAT;	2003/07/10
composed)").PN. US-PGPUB	12:15
27 0 (ytzp or ztpa) adj3 (comprises or USPAT;	2003/07/10
composed) US-PGPUB	12:16
28 0 (ytzp or ztpa) with (comprises or USPAT;	2003/07/10
composed) US-PGPUB	12:16
0 (ytzp or ztpa) with (comprises or USPAT;	2003/07/10
composes) US-PGPUB	12:16
30 31 (ytzp or ztpa) USPAT;	2003/07/10
US-PGPUB	13:12
31 4864 yttria near partially stabilized near USPAT;	2003/07/10
zirconia US-PGPUB	13:12
32 4865 yttria near partially neawr stabilized USPAT;	2003/07/10
near zirconia US-PGPUB	13:13

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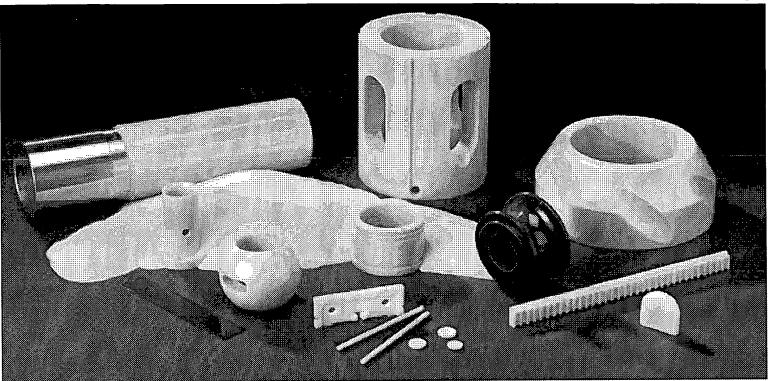
		T		
33	106	yttria near partially near stabilized	USPAT;	2003/07/10
		near zirconia	US-PGPUB	13:27
34	1230	partially near stabilized near zirconia	USPAT;	2003/07/10
			US-PGPUB	13:25
35	1976	yttria near zirconia	USPAT;	2003/07/10
			US-PGPUB	13:25
36	1240	(yttria near zirconia ) and (blade or	USPAT;	2003/07/10
		scalpel or drill or bit or knife or	US-PGPUB	13:28
		cutter o saw or needle or dissector or		
		scissors)		
37	575	yttria with partially with stabilized	USPAT;	2003/07/10
		with zirconia	US-PGPUB	13:27
38	380	(yttria with partially with stabilized	USPAT;	2003/07/10
		with zirconia ) and (blade or scalpel or	US-PGPUB	13:30
		drill or bit or knife or cutter o saw or		1
		needle or dissector or scissors)		l
39	299	' ' 4	USPAT;	2003/07/10
İ		with zirconia ) and (blade or scalpel or	US-PGPUB	13:29
		drill or bit or knife or cutter o saw or		
		needle or dissector or scissors)) not		
		(yttria near partially near stabilized		
		near zirconia )		0000/07/10
40	253		USPAT;	2003/07/10
		with zirconia ) and (blade or scalpel or	US-PGPUB	13:53
		drill or bit or knife or cutter or saw or		
	11	needle or dissector or scissors)	IICDAM.	2003/07/10
41	11	coorstek.AS.	USPAT; US-PGPUB	14:42
40	0.45	-12-2	USPAT;	2003/07/10
42	845	al2o3	US-PGPUB	14:43
4.2	120	2 - 2	USPAT;	2003/07/10
43	139	y2o3	US-PGPUB	15:02
44	1	/"6160161"\ DN	USPAT;	2003/07/10
44	1	("6160161").PN.	US-PGPUB	15:03
45	1	("5830816").PN.	USPAT;	2003/07/10
45	•	( 3030010 ).PN.	US-PGPUB	15:06
128	4482	ceramic with (scissors or blade or drill	USPAT;	2003/07/10
120	4402	or bit or knife)	US-PGPUB	16:03
129	4211	ceramic with (scissors or blade or drill	USPAT;	2003/07/10
129	4711	or knife)	US-PGPUB	16:04
	1	OT VIIITE)	100 10100	120.01

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## ZIRCONIA MATERIALS



CoorsTek is recognized worldwide for over 80 years of experience in the manufacturing of technical ceramics. CoorsTek's ceramic materials have proven to be unparalleled in quality. CoorsTek's zirconia materials, TTZ (Transformation Toughened Zirconia), YTZP (Yttria-partially Stabilized Zirconia), ZTA (Zirconia Toughened Alumina), and AZ-25 (Alumina-Zirconia Composite) provide unique characteristics to ensure dependable and economic solutions for our customers worldwide. CoorsTek has recently developed both a CeTZP (Ceria Stabilized) and a CeATZ (Alumina Toughened Zirconia) to provide additional strength to existing materials. CoorsTek is continually developing new materials to meet the needs of the ever changing market place.

## Zirconia Material Advantages:

- Excellent Strength and High Fracture Toughness:
   Zirconia is able to absorb the energy of impact that causes ceramic materials to shatter.
- Surface Finish: Zirconia is a highly polishable material that can achieve a 2-4 microinch Ra.
- Excellent Thermal Stability: Zirconia can tolerate thermal gradients better than most other high temperature materials. The coefficient of thermal expansion is similar to steel, allowing for stable performance in metal and ceramic component and assembly designs.
- Wear Resistant: Zirconia outperforms conventional components in demanding corrosive, abrasive, and erosive environments.
- NSF and USP Class VI Certified: CoorsTek's Zirconia material is certified for various medical and implant applications (Data available upon request).

## **Typical Applications Include:**

- Fluid handling components
- Medical equipment components
- Pumps
- Seals
- Valves
- Bearings & Bushings
- Knife blades
- Electro-surgical devices
- Implant units
- Buttons
- Mechanical applications